

CLAIMS

1. Modular proprioreceptive orthopedic insole to re-establish and/or preserve the correct dynamics of walking or running, said insole being made in an elastic material,
5 **characterized** in that firstly on its upper surface it comprises means (1) for activating the articular receptors located between the talus and the calcaneus as soon as a step is habitually initiated by the heel, and means (3,4,5) for guiding the foot when it becomes engaged on the
10 physiological axis of walking, and secondly on its undersurface it comprises at least one removable corrective element (11,12,13,14) able to provide abduction or adduction for respective deficient or excessive step initiation, and/or is able to correct a varus and/or
15 valgus.

2. Orthopedic insole as in the preceding claim, **characterized** in that on its undersurface the insole comprises at least one recess (7,8,9,10) positioned along
20 the inner and/or outer edge of said insole in which the removable corrective element (11 to 14) can be positioned that is made in a more rigid material than the insole material and whose shape corresponds to the shape of the recess (7 to 10).

25 3. Orthopedic insole as in claim 2 **characterized** in that the section of the recess (7 to 10) increases from the inner or outer edge of the insole in the direction of the median part of the insole over a short distance and then
30 decreases.

4. Orthopedic insole as in either of claims 2 or 3, **characterized** in that the wall of the recess (7 to 10) is

inclined inwardly towards the inside of said recess from the bottom part as far as its edge to form a lip (15) on the edge of the recess (7 to 10), and in that the removable element (11 to 14) on its periphery comprises a chamfer 5 (16) so that the lip (15) holds the removable element in position within the recess (7 to 10), said element being inserted in the recess by elastic deformation of the lip (15).

10 5. Orthopedic insole as in either of claims 2 or 3, **characterized** in that the removable element (11 to 14) on one of its surfaces comprises a male attachment member (17) able to cooperate with a female member (18) positioned at the bottom of the recess (7 to 10) to achieve attachment of 15 the removable element within the recess.

6. Orthopedic insole as in any of claims 2 to 5, **characterized** in that it comprises an anti-abduction recess (7) positioned along the inner edge of the insole and 20 extending from the plantar arch as far as the great toe.

7. Orthopedic insole as in any of claims 1 to 5, **characterized** in that it comprises an anti-adduction recess (8) positioned along the outer edge of the insole and 25 extending from the plantar arch as far as the cushion area of the small toe.

8. Orthopedic insole as in any of claims 2 to 7, **characterized** in that it comprises an anti-valgus or anti-30 pronation recess (10) positioned along the inner edge of the insole under the plantar arch.

9. Orthopedic insole as in any of claims 2 to 8, **characterized** in that it comprises an anti-varus or anti-

supination recess (9) positioned along the outer edge of the insole and extending from the cuboid as far as the second anti-adduction recess (8).

5 10. Orthopedic insole as in any of the preceding claims, **characterized** in that on its upper surface it is provided with a sub-calcaneus longitudinal profiled channel, or console (1), whose thickness increases from the heel as far as an area located substantially perpendicular
10 to the neck of the talus.

11. Orthopedic insole as in claim 10, **characterized** in that on its upper surface it comprises a sub-scaphoid profiled element (3) of substantially semi-domed shape
15 extending the console (1) towards the inside of the foot.

12. Orthopedic insole as in either of claims 10 or 11, **characterized** in that on its upper surface it comprises a sub-cuboid element (4) positioned on the outer side of
20 the sub-scaphoid element (3) and in the shape of a kidney bean, having its convexity facing backwardly at approximately 45° to the median longitudinal axis of the insole.

25 13. Orthopedic insole as in claim 11, **characterized** in that on its upper surface it comprises mediotarsal axial means (5) of obovate shape widening forwardly and ending just in front of the metatarsal heads so as to distribute bearing under the metatarsal regions.

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14. Orthopedic insole as in any of the preceding claims **characterized** in that on its undersurface it comprises a furrow (19) of serpentine shape extending substantially from the flat of the foot as far as the heel

and which comprises regularly distanced holes (20) leading to the upper surface of the insole so as to allow the evacuation of perspiration.

5 15. Orthopedic insole as in any of claims 1 to 14,
characterized in that the heel and the forefoot of the
insole have an alveolar structure.

10 16. Orthopedic insole as in claim 15 **characterized** in
that the alveolar structure consists of a honeycomb
structure.

15 17. Orthopedic insole as in either of claims 15 or
16, **characterized** in that in a posterior-external heel area
and/or metatarsal head area (23) and/or in a cushion area
under the great toe (24) it comprises alveoli of smaller
size than the alveoli in the remainder of the insole.

20 18. Orthopedic insole as in any of the preceding
claims **characterized** in that the height or depth of the
profiled elements (1,3,4,5) positioned on the upper surface
of the insole, of the recesses (7 to 10) positioned on the
undersurface of said insole, and of the removable elements
(11 to 14) arranged in at least one of the recesses, does
25 not exceed a few millimetres.